

MODELLING POST-FIRE EROSION ON  
NATURAL SLOPE CONTAINING  
NESOSILICATE MINERALS

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## **SUPERVISOR'S DECLARATION**

I hereby declare that I have checked this project and in my opinion, this project is adequate in terms of scope and quality for the award of the Bachelor Degree of Civil Engineering

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Date : 5 Jan 2018



## **STUDENT'S DECLARATION**

I hereby declare that the work in this thesis is based on my original work except for quotations and citations which have been duly acknowledged. I also declare that it has not been previously or concurrently submitted for any other degree at Universiti Malaysia Pahang or any other institutions.

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MODELLING POST-FIRE EROSION ON NATURAL SLOPE CONTAINING  
NESOSILICATES MINERAL

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Thesis submitted in fulfillment of the requirements  
for the award of the  
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UNIVERSITI MALAYSIA PAHANG

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Moses asked his Lord:  
Who are the most knowledgeable of your servants?

Allah said:

A scholar who is unsatisfied with his knowledge and adds the knowledge of people to his own.

Source: Şaḥīḥ Ibn Ḥibban 6352, Grade: Hasan

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In the name of Allah, the Most Gracious and the Most Merciful. “Surely, Allah is with those who are As-Saabiroon (the patient)”. First praise is to Allah, the Almighty, on whom ultimately we depend for sustenance and guidance.

Second, Selawat and Salam always dedicated to our beloved prophet Muhammad SAW, the last prophet and the prophet who had brought us from the darkness to the brightness.

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## **LIST OF SYMBOLS**

|       |   |
|-------|---|
| $F_s$ | Free Swell                                      |
| $G_s$ | Specific Gravity                                |
| $M_A$ | Mass of Crucible and Soil Sample After Ignition |
| $M_C$ | Mass of Crucible                                |
| $M_s$ | Mass of Crucible and Oven Dried Soil Sample     |
| $V_0$ | Volume of Dry Soil                              |
| $V_1$ | Soil Volume After Swelling                      |
| FOS   | Factor of Safety                                |

## **LIST OF ABBREVIATIONS**

|      |                                       |
|------|---------------------------------------|
| ASTM | American Society for Testing Material |
| BS   | British Standard                      |
| FS   | Free Swell                            |
| SWCC | Soil-Water Characteristic Curve       |
| FOS  | Factor of Safety                      |